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PROGRESS OF THE INTERNATIONAL COMPARISON PROJECT IN THE AFRICAN REGION

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Introduction

1. The purpose of the International Comparison Project (ICP) is to use national accounts aggregates as an effective basis for meaningful comparisons between countries be it at the regional or world level. Before the initiation of work on the calculation of purchasing power parities (PPP) the structure of African economies could only be viewed through the veil of exchange rates which conceal or distort many of its real features.

2. A United Nations study on purchasing power parities covering 34 countries in various regions, income levels and forms of economic organization has shown the systematic differences between the usual view of the structure of the world economy arising out of international comparisons based upon foreign exchange rate conversions and the structure one sees when actual prices are available.

ICP-Africa

3. Much progress has been made during the last two decades in the compilation and publication of national accounts aggregates for African countries. National accounts are available for almost all countries and for a number of these countries data series exist for up to 20 years. Admittedly differences exist among the series in data coverage, methods of estimation and presentation of the accounts, some of which are attributable to the level of statistical development and to national needs. But in the majority of cases these accounts have been constructed in accordance with the revised United Nations System of National Accounts. However, there is a growing feeling that the economic performance of countries cannot be truly compared using gross domestic product and related aggregates which are converted to a common reference currency by the use of official exchange rates. Also, that these official exchange rates cannot be taken to equal the 'true' purchasing power parities of the national currencies concerned. They could be considered as 'true' rates for converting goods and services that enter into international trade and used also as approximations for converting domestic product in situations where the national currencies concerned are converted into a common standard, say, gold. On the other hand, where national currencies are not convertible into an internationally accepted standard, official exchange rates cannot be regarded as the relevant rates of conversion in international comparisons of domestic product irrespective of whether the latter is expressed on a global or per capita basis. The reason being that the major part of the domestic product is consumed internally in the country and consequently does not enter into international trade thereby affecting the supply of, and the demand for, national currencies.

4. The ICP as a regional project was launched by ECA in 1970 with a view to enable valid comparisons of domestic product to be made among African countries, using volume comparisons which take account of the price levels of various components of an aggregate in different countries. This project was an extension of the world project jointly started by the United Nations Statistical Office and the University of Pennsylvania, U.S.A. from which it received technical guidance.

5. A total of 7 countries participated in the project. These were Ethiopia, Kenya, Ivory Coast, Morocco, Madagascar, Nigeria and Zaire. The original intention was to use Kenya as the common link for the binary comparisons, which would have had the advantage of facilitating comparisons between these seven countries and the U.S.A. as the binary comparison between Kenya and the U.S.A. was part of the world project. Due to the absence of detailed 'weights' in commodity detail in the case of Kenya, Ethiopia was chosen as the common link. This choice minimized but did not eliminate the problem of weighting. This weakness, coupled with a lack of comparable items, led to the transfer of a major portion of the 'weights' for Ethiopia from one commodity item to another, particularly in the case of the binary comparisons, Ethiopia -Ivory Coast and Ethiopia-Madagascar. This led to implausible results in some cases.

6. The result of the exercise was that the official rate of exchange appeared to under-state the purchasing power of some countries and over-state those of others. In the case of Morocco, Madagascar and Nigeria, the correspondence between the purchasing power equivalents of the currencies and the official rate of exchange was quite good.

ICP-World Project

7. The ICP World Project started in 1968 is now (1985) in its fifth phase. No African country participated in Phase I and one country from the region, Kenya, participated in Phase II in which the participating countries numbered 10 and 16 respectively.

8. Kenya, Malawi and Zambia participated in Phase III and Botswana, Cameroon, Ethiopia, Ivory Coast, Kenya, Madagascar, Malawi, Mali, Morocco, Nigeria, Senegal, Tanzania, Tunisia, Zambia and Zimbabwe took part in Phase IV. In addition, 55 countries from other regions participated in this Phase. The Statistical Office of the European Communities co-ordinated the Phase IV-Africa comparisons.

9. The work entailed carrying out volume comparisons which take account of the price levels of various components of an aggregate among countries. The conversion factors to be used for converting the aggregates in national currency to a common reference unit are then determined, whether real or not. Purchasing power parities which express these nominal values in real values are then derived.

10. The aggregates covered by the volume comparisons are gross domestic product (GDP) at purchasers value and its final uses, i.e.

(a) private consumption (including health services provided by general government to households).

(b) collective consumption excluding health services included in private consumption.

(c) gross fixed capital formation.

(d) change in stocks, and

(e) balance between exports and imports of goods and services.

11. Preparatory work was done in 1979 and 1980 and the necessary statistical surveys were carried out in 1980 in the French-speaking African countries. Surveys for the English-speaking countries were carried out in 1982.

12. The main purpose of the exercise is to obtain a tool for improving the international comparability of national accounts aggregates. Concentration is on one aspect of the comparability of these data, i.e. the conversion into a common currency taking into account real price level differences.

The results

13. The results of the exercise were examined at a meeting of the ICP on the Comparative Study of the Real Value of Gross Domestic Product in Africa (1980) held at Addis Ababa from 27 February - 2 March 1984.

14. In sum, the results were as follows: The price level index for a given aggregate was calculated as the ratio between the specific purchasing power parity and the exchange rate of the currency. The index for GDP expressed in relation to the average for the 15 countries corresponded to the general price level index. Of the 15 countries, 11 had a general price level below the average, while the index varied between 55 and 91 in the following order: Ethiopia, Malawi, Mali, Madagascar, Kenya, Tunisia, Tanzania, Botswana, Morocco, Senegal and Zimbabwe. Only 4 countries namely: Zambia, Cameroon, Ivory Coast, and Nigeria had a general price level above 100.The division into the two groups was largely determined by Nigeria which had a very high price level and greatly affected the average by virtue of its size. Because of the high dispersion of the overall price level the countries could be further regrouped.

15. Starting with the lowest indices, it was possible to distinguish six sub-groups: Ethiopia and Malawi in one group, followed by Mali, Madagascar, Kenya and Tunisia in another, then Tanzania, Botswana and Morocco. The fourth group consisted of Senegal and Zimbabwe, the fifth, Zambia, Cameroon and Ivory Coast which were above the average. Nigeria alone made up the sixth group with a general price level significantly higher than that of the other countries.

16. The indications are that the currencies of the 11 countries in the first group are undervalued if domestic product is compared by means of official exchange rates, whereas for the other 4 countries they are overvalued. The scale deviations vary with the general price level of each country. For example, the CFA franc is under-or overvalued depending on whether the GDP of Senegal or that of Ivory Coast is taken into consideration.

17. Purchasing power parity (PPP)has the characteristic that it sets aside international differences in relative prices so as to enable comparisons of the underlying 'volume' or real difference. In this way, it is not influenced by movements of exchange rates which can be erratic and short-lived although market rates of course remain appropriate for measuring official flows between countries.

18. The detailed results of the ICP-Africa are published in the document entitled "Comparison of Price Levels and Economic Aggregates: The Results for 15 African countries" 1985. Eurostat.

ICP-Phase V

19. All 15 African countries which participated in ICP Phase IV are participating in the Phase V exercise. In addition, the following 9 countries are participating: Benin, Congo, Egypt, Gabon, Mauritius, Rwanda, Sierra Leone, Swaziland and Zaire. This addition brings the number of African countries in Phase V to 24.

20. In all, about 80 countries world-wide will participate in Phase V. This number may change since there are several unresolved problems which may affect participation.

21. In order to prepare Phase V activities, an ICP-Africa meeting was held in Luxembourg from 15-19 April 1985. The meeting was attended by all 24 participating African countries, and dealt, inter alia, with (a) the general outline/framework of Phase V (b) methodological and organizational problems (c) calculation of elementary purchasing power parities (d) implication of participation and (e) proposals for future action.

22. As in Phase IV, Phase V activities concentrate primarily on achieving robust intra-regional comparisons which require that comparisons reflect the product characteristics of each region, and are not unduly influenced by the characteristics of consumption of other regions as could happen when direct world level studies are undertaken. Extension of the regional studies to world level will, however, be ensured through 'core country' comparisons, involving for selected countries in each region co-ordinated price comparisons for products which can be considered to have inter-regional characteristics. Some 15 countries world-wide will be designated 'core countries'. These countries will be engaged in both pricing studies for the assessment of intra-regional PPPs and in a similar but probably more extensive activity on a wider product range ensuring linkage of the separate regions to world level. It should be noted that there is a likelihood of substantial degree of overlap between the product sets defined for intra-regional comparisons. For the African region, Kenya, Nigeria and Senegal have been designated ICP 'core countries'.

Classification for the African comparisons

23. An outline of the classification for the African comparisons is given below:

Outline of the classification for the African comparisons

Final consumption expenditure of the population	(138)
Public final consumption expenditure	(9)
Comprising:	
Compensation of employees	(3)
Intermediate consumption of goods and services	(3)
Consumption of fixed capital	(3)

Gross capital formation	
Comprising:	
Gross fixed capital	
- producers durable goods	(22)
- construction	(12)
Change in stocks	(2)
Exports less imports of goods and services	(2)
= Gross Domestic Product at Market Prices	(185)

24. This classification permits the defintion of generally homogenous groupings of product for which aggregate final expenditure data are likely to be available or derivable in participating countries. By breaking down GDP at market prices into final uses the classification also defines those categories of goods and services for which final price data are required. Also, by progressively refining the classification, it is expected that the dispersion of items price ratios between countries would drop for each category. The finer the classification adopted the smaller the sampling variance of price ratios, and the precision of category parity measures would increase as category boundaries are drawn in and the number of categories increases.

25. The overall classification scheme for which expenditure data for the calculation of weights will be required would be composed of 185 basic headings. Of these, 138 or 75 per cent will be for final consumption expenditure of the population. In Phase IV the total number of selected products for household consumption numbered 936. Of these 237 products have been deleted from the Phase V list consequent on discussions at the ICP-Africa meeting, Addis Ababa, February/March 1984, and further analysis of the data provided by African countries. The reason for this was that these products did not improve the precision of the African comparisons. The present list is not exhaustive as it may not include representative products of the 9 African countries which have now joined ICP in the Phase V exercise. The essential requirement for the calculation of parities is that any product included in the list has to be priced in at least two countries to provide a link for comparison. The product must, however, be characteristic of at least one country.

Procedures

26. The methodology involves the collection of the prices which make up the gross domestic product of each country participating in the comparison, the largest series of which will relate to the final consumption of households. The inter-regional comparisons will therefore be associated with the national objectives of planning, improving living standards, pricing policies, etc. In order to formulate a price policy, for example, it is essential to know about trends in the prices of products which are representative of the consumption of households.

27. The ICP survey will cover a period of one to four months in each country, the period to be selected being that when the average prices (or price indices) are closest to annual average prices (or annual indices). In some countries this period will not be easy to identify either because it differs from one part of the country to the other, or because there are no reliable time series of prices which can be used to pinpoint this. Countries are advised to start the exercise during the good season i.e. at a time when it is possible to reach places where the survey is to be conducted. In some areas it will be the dry season, in others it will be during the moderately rainy season. Ideally, the observations should cover a whole year. Interviews are to be well spaced in order to avoid wearing out the interviewees. The sample should be changed each year.

28. The stratification procedure entails:

1. Dividing each country into economic regions which are relatively homogeneous with respect to the consumption patterns of households.

2. Subdividing each region into two areas, one urban, and the other rural, in order to take account of differences in the behaviour patterns of households in urban centres and rural communities.

3. Selecting in each area one to four centres where the surveys will be conducted.

4. Selecting in each centre and for each product, one to five survey points.

Pairing of countries for the core comparisons

29. Proposals for the organizational group in the pairing of countries for the core comparisons is as follows:

Between OECD and Africa

United Kingdom	-	Kenya
France		Senegal
Italy	-	Tunisia

Between OECD and ESCAP

United States	-	India
United States	-	Philippines
Turkey	-	Pakistan

Between Africa and ESCAP

Kenya - India

Between OECD and Latin America

Germany, FR - Argentina

There is a possibility of a Pakistan-Nigeria and a Spain-Brazil comparison.

30. ICP is facing some financial problems. However, the generous contributions of the European Economic Community (EEC) will, it is hoped, enable the African comparisons to go on without interruption.

ICP and national statistics

31. Most participating countries have reported having derived considerable benefits from the project. Some countries have used the project for the collection of useful price data and thus improve their data base in price statistics. In the area of national prices and income policies, the ICP requirements have enabled some broad measure of national prices and regional variations in terms of the population concerned. Improvements in consumer and wholesale price indexes have also been achieved. Other advantages of participation include, estimation of detailed categories of private consumption, public consumption and investment expenditure which can provide stimulation to the development of procedures which, if followed on a regular basis, can provide detailed and reliable national accounts data. Two areas where such developments are likely to occur are in the promotion of African household expenditure and consumption surveys (to provide supporting data for the sub-classification of private consumption) and in capital formation where the detailed structural analysis required to classify construction and equipment expenditures may require refinements of survey questionnaire.

32. No doubt the ICP has resulted in much improvement in price statistics and national accounts in countries of the African region.